

Abstract of the Disclosure

A first charge/discharge element is connected in parallel to a coil portion of the primary coil of a converter transformer. A second charge/discharge element is connected in parallel to a coil portion of the primary coil. The first charge/discharge element is charged with the energy stored in the primary coil when the first switching element turns off. A smoothing capacitor is charged with the charge energy when the second switching element turns off. The second charge/discharge element is charged with the energy stored in the primary coil when the second switching element turns off. The smoothing capacitor is charged with the charge energy when the first switching element turns off.